

CLAIMS:

We claim:

1. A hatch for access to an opening in the ground or floor comprising:
 - a frame;
 - 5 a lid having an underside and a topside, the lid rotatably attached to the frame so it may be selectively moved between a closed position and an open position;
 - a spring support selectively connected to the underside of the lid; and
 - at least one spring connected to the spring support, the spring including a clip arm and a spring arm, wherein the clip arm is attached to the lid, and the spring arm
 - 10 makes contact with the frame;
 - wherein the spring biases the lid toward the open position.
2. The hatch of claim 1 further including at least two rings located on the underside of the lid, wherein the spring support is slideably connected to the lid at the rings.
- 15 3. The hatch of claim 2 wherein there are three rings attached to the underside of the lid and aligned to slideably receive the spring support.
4. The hatch of claim 1 wherein there is at least one rib attached to the underside of the lid, and having an aperture therein to receive the clip arm.
5. The hatch of claim 1 wherein a lug extends inwardly from the frame to
- 20 guide and support the spring arm as the lid moves.
6. The hatch of claim 1 further including a safety arm that is attached to the hatch, and movable from a storage position to a locking position to prevent the lid from being closed.

7. The hatch of claim 1 further including a latch connected to the underside of the lid.

8. An hatch for access to an opening in the ground or floor comprising:
a frame;

5 a lid having an underside and a topside, the lid hingedly attached to the frame so it may be selectively moved between a closed position and an open position;

a spring receptor connected to the underside of the lid; and

at least one spring connected to the spring receptor, the spring including a clip arm and a spring arm, wherein the clip arm is selectively attached to the lid, and the
10 spring arm makes contact with the frame;

wherein the spring biases the lid towards an open position.

9. The hatch of claim 8 wherein the spring is slideably connected to the spring receptor.

10. The hatch of claim 9 wherein the spring receptor extends from a rib
15 attached to the underside of the lid.

11. The hatch of claim 10 wherein the rib has an aperture therein to receive the clip arm.

12. The hatch of claim 8 wherein a lug inwardly extends from the frame to guide and support the spring arm as the lid moves.

13. The hatch of claim 8 further including a safety arm that is selectively
20 attached to the lid, and movable from a storage position to a locking position to prevent the lid from being closed.

14. The hatch of claim 8 further including a latch connected to the underside of the lid.

15. A spring assembly for a hatch comprised of a lid and a frame, the spring assembly comprising:

5 a torsion spring having a body with a clip arm and a spring arm extending from opposite ends of the body;

wherein the spring is attached to the lid so that the spring arm only makes sliding contact with the frame as the lid moves from an open to a closed position.

16. The spring assembly of claim 15 wherein the spring is slideably attached
10 to a cylinder that is connected to the lid.

17. The spring assembly of claim 16 wherein the clip arm is attached to a rib extending from the lid so that the spring cannot slide off of the cylinder.

18. The spring assembly of claim 15 wherein the spring is attached to a spring receptor extending from a rib attached to the lid.

15 19. The spring assembly of claim 18 wherein the clip arm extends through a rib having an aperture, the rib attached to the lid, and the clip arm selectively fastened so that the spring cannot slide off of the spring receptor.

20. The method for assembling a hatch with a frame and a lid, and having a spring assembly to assist in lifting the hatch lid, the method comprising the steps of:

20 (a) placing the lid in a position so that the lid underside may be accessed;

(b) sliding a torsion spring with a clip arm and a spring arm in engagement with a spring receptor on the lid so that the clip arm is attached to the underside of the lid, and the spring arm is adapted to slidingly contact the hatch frame.

21. The method of claim 20 further including the step: (c) selectively locking
5 to the clip arm so that the spring cannot slide off of the spring receptor.

22. The method of claim 21, wherein the steps (a)-(c) are performed in the order recited.

23. The method for assembling a hatch with a lid and a frame, and having a spring assembly having a cylinder to assist in lifting the hatch lid, the method comprising
10 the steps of:

(a) attaching a clip arm of a torsion spring to the underside of the lid;
(b) sliding the cylinder through the spring body and through rings extending from the underside of the lid so that the spring is connected to the lid;

(c) placing a spring arm extending from the spring body into sliding
15 contact with the frame.

24. The method of claim 22, wherein the steps (a)-(c) are performed in the order recited.

25. The method of claim 24 further including the step of selectively locking the cylinder to the lid.